

# Contents Volume 74, 1988/1989

## Special Issue "Fluid-Rock Interactions in the Salt Dome Environment", by H.H. POSEY and J.R. KYLE (Guest-Editors)

<i>Preface</i> , by H.H. Posey and J.R. Kyle (Guest-Editors) .....	vii
Fluid-rock interactions in the salt dome environment: An introduction and review	
H.H. Posey and J.R. Kyle (Austin, Texas, U.S.A.) .....	1
Louann salt geochemistry (Gulf of Mexico sedimentary basin, U.S.A.): A preliminary synthesis	
L.S. Land, J.A. Kupecz and L.E. Mack (Austin, Texas, U.S.A.) .....	25
Evolution of metal ratios and $\delta^{34}\text{S}$ composition of sulfide mineralization during anhydrite cap rock formation, Hockley Dome, Texas, U.S.A.	
J.R. Kyle and W.N. Agee, Jr. (Austin, Texas, U.S.A.) .....	37
Recent hydrocarbon alteration, sulfate reduction and formation of elemental sulfur and metal sulfides in salt dome cap rock	
R. Sassen, E.W. Chinn and C. McCabe (Baton Rouge, La., U.S.A.) .....	57
A petrographic and geochemical model for the origin of calcite cap rock at Damon Mound salt dome, Texas, U.S.A.	
J.D. Prikryl, H.H. Posey and J.R. Kyle (Austin, Texas, U.S.A.) .....	67
Calcite and iron sulfide cementation of Miocene sediments flanking the West Hackberry salt dome, southwest Louisiana, U.S.A.	
Kathleen M. McManus and J.S. Hanor (Baton Rouge, La., U.S.A.) .....	99
Petrography and geochemistry of water-rock interactions in Richton Dome cap rock (southeastern Mississippi, U.S.A.)	
M.L. Werner (Long Beach, Calif., U.S.A.), M.D. Feldman and L.P. Knauth (Tempe, Ariz., U.S.A.) .....	113
Mineralogic and isotopic constraints on the origin of strontium-rich cap rock, Tatum Dome, Mississippi, U.S.A.	
J.A. Saunders (University, Miss., U.S.A.), J.D. Prikryl and H.H. Posey (Austin, Texas, U.S.A.) .....	137
Strontium isotopes in brines and associated rocks from Cretaceous strata in the Mississippi Salt Dome Basin (southeastern Mississippi, U.S.A.)	
C.W. Russell (Baton Rouge, La., U.S.A.), J.B. Cowart (Tallahassee, Fla., U.S.A.) and Gail S. Russell (Hattiesburg, Miss., U.S.A.) .....	153
Density-driven groundwater flow near salt domes	
V. Ranganathan (Bloomington, Ind., U.S.A.) and J.S. Hanor (Baton Rouge, La., U.S.A.) .....	173

## Research Papers

Modern liquid chromatographic techniques for the separation of Nd and Sr for isotopic analyses	
R.M. Cassidy (Mainz, Federal Republic of Germany, and Chalk River, Ont., Canada) and C. Chauvel (Mainz, Federal Republic of Germany) .....	189
Proton microprobe-determined partitioning of Nb, Ta, Zr, Sr and Y between garnet, clinopyroxene and basaltic magma at high pressure and temperature	
T.H. Green (Sydney, N.S.W., Australia), S.H. Sie, C.G. Ryan and D.R. Cousens (North Ryde, N.S.W., Australia) .....	201
Alkaline basalt-phonolite rocks from the Singen area, Hegau, southern F.R.G.	
R.F. Mahfoud and J.N. Beck (Lake Charles, La., U.S.A.) .....	217
On the origin of the Italian potassic magmas, 1. A discussion contribution	
R. Vollmer (Leeds, Great Britain) .....	229
Origin of light hydrocarbons from volcanic rocks in the "Green Tuff" region of northeast Japan: Biogenic versus magmatic	
S. Sakata, M. Takahashi, S. Igari (Ibaraki, Japan) and N. Suzuki (Shimane, Japan) .....	241
Organic geochemistry of a phosphorite to black shale transgressive succession: Wilhelmöya and Janusfjellet Formations (Rhaetian-Jurassic) in central Spitsbergen, Arctic Ocean	
K.P. Krajewski (Warsaw, Poland) .....	249

On the geochemistry of strontium in Bulgarian coals Greta Eskenazy and Ekaterina Minčeva (Sofia, Bulgaria) .....	265
Carbonate equilibria and pH buffering by organic acids — Response to changes in $p_{\text{CO}_2}$ P.D. Lundegard and L.S. Land (Austin, Texas, U.S.A.) .....	277
Experimental determination of the compositional limits of immiscibility in the system $\text{CaCl}_2\text{-H}_2\text{O-CO}_2$ at high temperatures and pressures using synthetic fluid inclusions Y.-G. Zhang and J.D. Frantz (Washington, D.C., U.S.A.) .....	289
The solubility of calcite and aragonite in sulfate-free seawater and the seeded growth kinetics and composition of the precipitates at 25°C A. Mucci, R. Canuel and S. Zhong (Montreal, Que., Canada) .....	309
Iron oxides in acid mine drainage environments and their association with bacteria F.G. Ferris, K. Tazaki and W.S. Fyfe (London, Ont., Canada) .....	321
The elemental chemistry of sediments in the Krishna River basin, India R. Ramesh (Montreal, Que., Canada), V. Subramanian (New Delhi, India), R. van Grieken and L. Van 't Dack (Wilrijk, Belgium) .....	331
Pressure leaching of boron from argillaceous sediments for facies analysis G. Zeibig, F. Kubanek and J. Luck (Berlin, Federal Republic of Germany) .....	343
Allochthonous surface alteration of Ni-laterites W. Schellmann (Hannover, Federal Republic of Germany) .....	351
The heavy-metal adsorption characteristics of Hawthorne Formation (Florida, U.S.A.) sediments S. Rose (Atlanta, Ga., U.S.A.) .....	365
<i>Contents Volume 74, 1988/1989</i> .....	371
<i>Guide for Authors</i>	

1

3

3